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**REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2834
PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q62613

Yoshihito ASAO, et al.

Appln. No.: 09/769,408

Group Art Unit: 2834

Confirmation No.: 4699

Examiner: Hanh N. NGUYEN

Filed: January 26, 2001

For: AUTOMOTIVE ALTERNATOR

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Reconsider.
DENIED
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REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116

ATTN: BOX AF

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated September 20, 2002, reconsideration and allowance of the subject application are respectfully requested. Upon entry of this Request, claims 1-19 are pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

In the Office Action, the Examiner has maintained the prior art rejections. Specifically, claims 1, 2, 4, 5, 11, 12 and 14 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda et al. (USP 6,011,332; hereafter "Umeda") in view of Hiroshi (EP 0671801). Claim 13 remains rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda, Hiroshi and Kato et al. (USP 6,140,735; hereafter "Kato"). Claim 3 remains rejected under 35 U.S.C. §

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103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda, Hiroshi and Yoshioka (USP 5,977,668). Claims 6-8 and 15-17 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda, Hiroshi and Tanaka et al. (USP 5,235,229; hereafter "Tanaka"). Claims 9 and 18 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda, Hiroshi, Tanaka and Ishida et al. (USP 5,561,334; hereafter "Ishida"). Claims 10 and 19 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Umeda, Hiroshi, Tanaka and Yoshioka.

Applicant respectfully submits the claimed invention would not have been rendered obvious in view of Hiroshi, alone or combined with the other cited references. In particular, Applicant submits that Hiroshi does not provide any teaching or suggestion that would lead one of ordinary skill in the art to believe the alternator of Hiroshi provides "a front-end air intake flow rate is greater than a rear-end air intake flow rate", as recited in independent claim 1, and "a front-end air discharge flow rate is greater than a rear-end air discharge flow rate", as recited in independent claim 14.

With regards to independent claim 1, the Examiner contends that Hiroshi (Figure 1) discloses that the front-end air intake flow rate is greater than the rear-end air intake flow rate because Figure 1 of Hiroshi shows there are many air resistant objects between the rear-end air intake aperture and the rear-end fan, and the distance from the rear-end air intake aperture to the rear-end fan is so long that the resistance to the air flow is large and the air flow rate becomes small. Further, the Examiner states that since

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there is virtually no difference between the structure of Fig. 1 of the present invention and the structure disclosed by Hiroshi (both have greater aperture size on the rear end, both have rear-end blowing means greater than front-end blowing means, both have long air way[s] between rear aperture to fan blades, both have many resistance objects in the rear end, both have short and clear air way[s] in the front end), if the embodiment of present invention has "a capacity of said rear-end blowing means is greater than a capacity of said front-end blowing means, and a front-end air intake flow rate is greater than a rear-end air intake flow rate", it would make sense to assert that the structure of Hiroshi also has those features.

With regards to independent claim 14, the Examiner states that since both Figure 1 of the present application and Figure 1 of Hiroshi "have an arrow showing a small portion of air flown from front-end to rear-end (a front-end flow rate is greater than a front-end discharge flow rate), it suggests that air pressure on front side is greater on air pressure on rear side or front-end air discharge flow rate is greater than a rear-end discharge flow rate." Further, the Examiner contends that "[b]ecause that there is virtually no difference between the structure of Fig. 1 of the present invention and the structure disclosed by Hiroshi, if the structure of present invention has 'a front-end air discharge flow rate is greater than a rear-end discharge flow rate', it would make sense to assert that the structure of Hiroshi also has that feature."

Hiroshi is directed to an alternator which aims to enhance the endurance of a bearing disposed at the pulley-side of the alternator and prevent a bearing disposed at the anti-pulley-side of the alternator from creeping. However, Hiroshi does not provide any teaching or suggestion that would enable cooling efficiency to be raised and enable wind noise to be reduced by controlling the capacity of the fan, the air intake flow rate and the air discharge flow rate. Namely, Hiroshi does not teach or suggest that the capacity of the rear-end blowing means is greater than the capacity of the front-end blowing means, that the front-end air intake flow rate is greater than the rear-end air intake flow rate, or that the front-end air discharge flow rate is

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greater than the rear-end air discharge flow rate. That is, Hiroshi does not discuss in any manner fan capacity or air flow rate or the problems associated therewith. Consequently, Applicant submits that any determination regarding the relationship between the capacity of the rear-end blowing means and the capacity of the front-end blowing means, the relationship between the front-end air intake flow rate and the rear-end air intake flow rate, and the relationship between the front-end air discharge flow rate and the rear-end air discharge flow rate is simply subjective conjecture made on the basis of drawings alone.

Since the disclosure of Hiroshi is silent regarding fan capacity and air flow rate, the Examiner appears to be relying on the principle of inherency in rejecting the claims in view of the drawings of Hiroshi. However, it is well settled that "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by person of ordinary skill.

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Moreover, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flow from the teaching of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

In Figure 1 of Hiroshi, the Examiner contends that the blade size of the rear-end fan is greater than the blade size of the front-end fan. Therefore, the Examiner conjectures that the

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capacity of the rear-end fan is greater than that of the front-end fan. However, fan blade size (e.g., blade height and blade chord length) is not the only factor that is determinative of fan capacity. That is, by providing a greater number of blades on the rear-end fan than the front-end fan, the capacity of the rear-end fan may be greater than the capacity of the front-end fan when the blade sizes are front-end and rear-end fans are the same (e.g., see Inventive Example 4 on page 23 of the specification). Further, fan capacity is determined by other factors including fan diameter and base plate shape. Moreover, while drawings can anticipate or make obvious the claimed invention, when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hokerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000).

With regards to the relationship between the front-end air intake flow rate and the rear-end air intake flow rate (or the front-end air discharge flow rate and the rear-end air discharge flow rate), the air flow rate can be increased by increasing the capacity of the fan. However, because the capacity of the rear-end fan is greater than that of the front-end fan, it does not necessarily follow that the rear-end air flow rate is greater than the front-end air flow rate.

As shown in Figure 2 of the present application, if the capacity of the rear-end fan is less than a prescribed capacity, the rear-end air flow rate is less than the front-end air flow rate. Namely, the relationship between the front-end air flow rate and the rear-end air flow rate can be controlled by changing the capacity of the fan. For example, the present invention teaches that the front-end air intake flow rate and the front-end air discharge flow rate can be made larger

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then the rear-end air intake flow rate and the rear-end air discharge flow rate by based on the outside diameters, number of blades, blade heights and/or blade chord lengths of the front-end fan and the rear-end fan.

Further, the air flow rate can be reduced by increasing the resistance to the air flow. However, because the resistance to the air flow in the rear-end ventilation pathway is larger than that in the front-end ventilation pathway, it dose not necessarily follow that the rear-end air flow rate is less than the front-end air flow rate. Namely, the air flow rate can be changed by changing the capacity of the fan, as shown in Figure 2 of this application.

Furthermore, because the air flows from the front side to the rear side, it dose not necessarily follow that the front-end air intake flow rate and the front-end air discharge flow rate are larger than the rear-end air intake flow rate and the rear-end air discharge flow rate. The air flows from the inner side of the fan blade to the outer side of the fan blade by rotating the fan, whereby the pressure of the inner side of the fan blade decreases and the pressure of the outer side of the fan blade increases. The pressure of the fan means the pressure of the outer side of the fan blade. Therefore, if the pressure of the rear-end fan is higher than that of the front-end fan, the pressure of the inner side of the rear-end fan is lower than the pressure of the inner side of the front-end fan, whereby the air flows from the front side to the rear side. Consequently, even if the air flows from the front side to the rear side, it can not be determined whether the front-end air intake flow rate and the front-end air discharge flow rate are larger than the rear-end air intake flow rate and the rear-end air discharge flow rate.

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Accordingly, it is not possible to determine whether the front-end air intake flow rate and the front-end air discharge flow rate are larger than the rear-end air intake flow rate and the rear-end air discharge flow rate on the basis of only drawings of Hiroshi. Consequently, Applicant respectfully submits that the Examiner's assertion that Hiroshi teaches that the front-end air intake flow rate and the front-end air discharge flow rate are larger than the rear-end air intake flow rate and the rear-end air discharge flow rate is not supported by the disclosure of Hiroshi.


In view of the above, Applicant respectfully submits that independent claims 1 and 14, as well as dependent claims 2-13 and 15-19, should be allowable because the combined references do not teach or suggest all of the features of the claims.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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Attorney Docket No.: Q62613